IN THE CLAIMS

Please amend the claim as follows:

1. (Currently Amended) A semiconductor optical transmitter including a plurality of active layers formed on a semiconductor substrate, the optical transmitter comprising:

a distributed feedback laser diode including a grating ~~for~~ that is configured to reflect~~ing~~ light with a predetermined wavelength ~~–~~and a first active layer ~~for~~ that is configured to oscillate~~ing~~ ~~received~~ light received from the grating;

an electro-absorption modulator including a second active layer ~~for~~ that is configured to receive~~ing~~ light ~~–~~from the first active layer, wherein ~~the received light~~ intensity of the light received from the first active layer is modulated through a change of absorbency in accordance with an applied voltage;

an optical amplifier including a third active layer ~~for~~ that is configured to amplify~~ing~~ ~~received~~ light received from the second active layer;

a first bidirectional optical attenuator interposed between the first active layer and the second active layer; and

a second bidirectional optical attenuator interposed between the second active layer and the third active layer.

2. (Original) The semiconductor optical transmitter as claimed in claim 1, wherein the semiconductor optical transmitter is a semiconductor monolithic integrated optical transmitter.

3. (Currently Amended) The semiconductor ~~monolithic integrated~~ optical transmitter as claimed in claim 2, wherein the first bidirectional optical attenuator is formed between the distributed feedback laser diode and the electro-absorption modulator.

4. (Currently Amended) The semiconductor ~~monolithic integrated~~ optical transmitter as claimed in claim 3, wherein the bidirectional first optical attenuator is configured to mitigates hole pile-up in the electro-absorption modulator.

5. (Currently Amended) The semiconductor ~~monolithic integrated~~ optical transmitter as claimed in claim 2, wherein the second bidirectional optical attenuator is formed between the electro-absorption modulator and the semiconductor optical amplifier.

6. (Currently Amended) The semiconductor ~~monolithic integrated~~ optical transmitter as claimed in claim 5, wherein the second bidirectional optical attenuator is configured to adjusts intensities of ~~received~~ light ~~in~~ received by the semiconductor optical amplifier.

7. (Currently Amended) The semiconductor ~~monolithic integrated~~ optical transmitter as claimed in claim 2, wherein the distributed feedback laser diode, the electro-absorption modulator and the semiconductor optical amplifier, each have respective different energy bandgaps.

8. (Currently Amended) The semiconductor ~~monolithic integrated~~ optical transmitter as claimed in claim 2, wherein an energy bandgap of the electro-absorption modulator is largest and an energy bandgap of the distributed feedback laser diode is smallest.

9. (Currently Amended) The semiconductor ~~monolithic integrated~~ optical transmitter as claimed in claim 2, wherein the third active layer of the optical amplifier has an adjustable gain in accordance with an applied current.

10. (Currently Amended) The semiconductor ~~monolithic integrated~~ optical transmitter as claimed in claim 2, wherein the third active layer of the optical amplifier has a predetermined gain peak.

11. (Currently Amended) The semiconductor ~~monolithic integrated~~ optical transmitter as claimed in claim 9, wherein the optical amplifier has a linear gain -and a non-linear range mode of operation.

12. (Currently Amended) The semiconductor ~~monolithic integrated~~ optical transmitter as claimed in claim 11, wherein the optical amplifier in the non-linear gain mode compensates for frequency chirp of the ~~EA MOD~~ electro-absorption modulator.

13. (New) The semiconductor optical transmitter as claimed in claim 2 further comprising a first trench interposed between the distributed feedback laser diode and the electro-absorption modulator.

14. (New) The semiconductor optical transmitter as claimed in claim 13 further comprising a second trench interposed between the electro-absorption modulator and the optical amplifier.

15. (New) The semiconductor optical transmitter as claimed in claim 1 further comprising a window being contiguous to the third active layer, being configured to receive light from the third active layer, and being configured to diverge light received from the third active layer.

16. (New) The semiconductor optical transmitter as claimed in claim 2 further comprising an antireflection layer applied to an end of the transmitter, the end adjacent to the semiconductor optical amplifier.

17. (New) The semiconductor optical transmitter as claimed in claim 1, wherein the first bidirectional optical attenuator is configured to mitigate hole pile-up in the electro-absorption modulator.

18. (New) The semiconductor optical transmitter as claimed in claim 1, wherein the first bidirectional optical attenuator has a thickness larger than that of the first and second active layers to diverge light received from the first active layer or the second active layer.

19. (New) The semiconductor optical transmitter as claimed in claim 1, wherein the second bidirectional optical attenuator has a thickness larger than that of the second and third active layers to diverge light received from the second active layer or the third active layer.